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$k$-regular subgraphs near the $k$-core threshold of a random graph.

We prove that the binomial random graph $G_{n,p} = c/n$ with high probability has a $k$-regular subgraph if $c$ is at least $e^{-\Theta(k)}$ above the threshold for the appearance of a subgraph with minimum degree at least $k$; i.e. an non-empty $k$-core. In particular, this pins down the threshold for the appearance of a $k$-regular subgraph to a window of size $e^{-\Theta(k)}$. (Joint work with Dieter Mitsche and Mike Molloy.) (Received August 14, 2018)